ABSTRACT

Under the assumption that in-cylinder intake air quantities which are imbibed into a combustion chamber are constant, and on the basis of the relationship that the product between a command final fuel injection quantity Fi (Fi(k-M)) and a detection air/fuel ratio abyfs(k) becomes equal to the product between a target command basic fuel injection quantity Fbaset for making the actual air/fuel ratio of an engine a target air/fuel ratio abyfr(k) and a target air/fuel ratio abyfr(k), this air/fuel ratio control apparatus evaluates the quantity Fbaset (= (abyfs(k)/abyfr(k))·Fi(k-M)), and it divides the quantity Fbaset by an uncorrected command basic fuel injection quantity Fbaseb(k), thereby to evaluate a basic-fuel-injection-quantity correction coefficient KF (= Fbaset/Fbaseb(k)). The uncorrected command basic fuel injection quantity Fbaseb at the next time is multiplied by coefficient KF, thereby to successively correct the next uncorrected command basic fuel injection quantity Fbaseb.